Chapter 6

PRINTING YOUR MAPS

Introduction

C2020 offers a variety of options and tools for printing maps. You can simply print your map as it appears onscreen, or you can create and print a more complex layout—a page design incorporating different maps and dataviews, and enhanced with titles, labels, and graphics.

What You Will Learn in Chapter 6

In this chapter you will learn how to:

- Print a map that is on your screen.
- Print maps using the layout tools to create a page design incorporating different maps, dataviews, and labels on the same page.

IN THIS CHAPTER

Requirements for Chapter 6

The exercises in this chapter assume that you have read chapters 1-5. It is also assumed that you have a printer connected to your computer or network.

Introduction to Exercise 1: Printing Your Map as it Appears On Your Screen

In this exercise you will learn basic steps to print a single map.

What You Will Learn in Exercise 1

In this exercise you will learn how to:

- Choose the correct printer, orientation, paper size, and resolution.
- Print what you see in a map window.

Printing Directly From a Map Window

There are typically only three steps that you will perform before printing a map as it appears on your screen: Open the map, resize the window if necessary, and use the Pan and Zoom tools to center your target area.

Open the Map

1. Open the *property.map* from c:\my-data, which you created in chapter 3. If you have trouble opening this map or if you did not save it, then open any other map from the Map Library.

2. Give your map proportions similar to a sheet of letter-sized paper on its side, at about the proportions shown below (this is known as *landscape* orientation, whereas *portrait* orientation is reflected by a piece of letter-sized paper standing upright).

   If you need to resize your map to appear like the one below, move your cursor to any corner of the map until you see the two-ended arrow appear. When this occurs, click on and drag the map edge to the appropriate size.
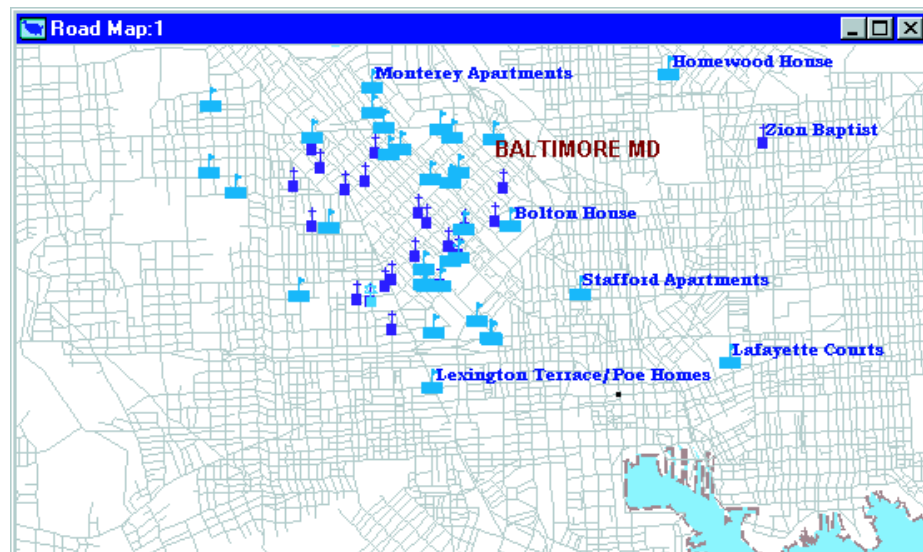
Print the Map

3. Select **File, Print,** from the Main Menu. The Print Map dialog box appears.

    Because your map is wider than it is tall, you are going to change the orientation of the printed page in the Print dialog box. This change will allow the map to make full use of the space on the page.

Change to Landscape (horizontal) page orientation ——
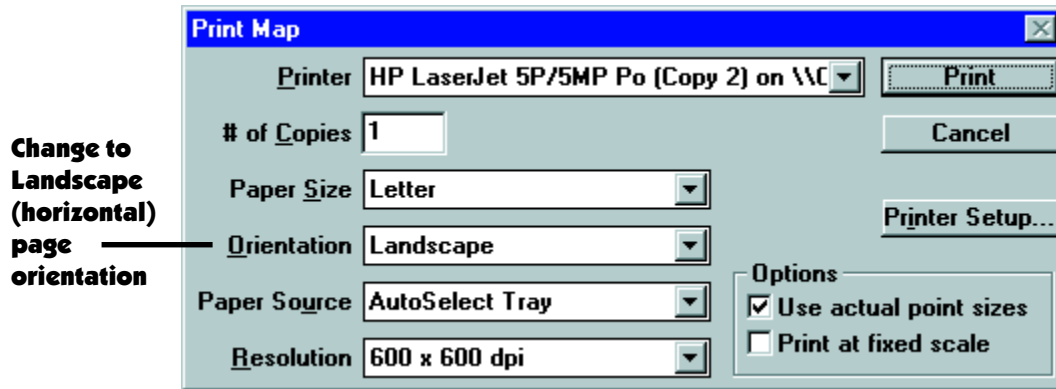
When you print a map, C2020 normally changes the scale so that the printed map is as large as it can be on the printed page, based on the paper size, paper orientation, and margin settings you choose. There are options you can select, however, to change this. In the lower right part of the Print Map dialog box is a checkbox option labeled "Use actual point sizes." Check this box now. When you you check this box, the software will use the actual point sizes for automatic labels, symbols, line styles, and pie and bar charts in your map instead of scaling them up or down to fit the page. The printed map may not, however, exactly match the map window. If you check the second box, "Print at fixed scale," the software will print the map at the exact same map scale as that used in the map window. The printed map, however, depending again on paper size and page orientation, may cover a smaller or larger geographic area than the map window.

4. Finally, **click on Print.**

Wrapping Up

You have just learned a quick and easy method for printing any map you are viewing on your screen. You have also learned how to change the page orientation to make the best use of the page size and how to choose whether or not map features are resized when C2020 resizes your map to fill the page.

For simply printing out a hard copy of your map, the steps you have just learned are often all you will need to know. But for more formal documents, such as proposals, reports, and presentations, you should take advantage of the Layout tools. You will learn about them in exercise 2.

Introduction to Exercise 2: Printing Using a Layout

In Exercise 1 you learned how to quickly print a single map on a page. If you want to print more than one map on a page, however, or if you wish to add a title to a map or print a map and a dataview on the same page, it is recommended that you print using a Layout. With the Layout feature, you can design a page containing one or more maps, dataviews, legends, symbols, and text boxes at any size and position on the page. Your layout elements can include titles, callouts, and graphics created in other programs. You can save your layout as a reusable template, with your standard graphics, placeholder text boxes, and empty frames to hold maps or dataviews.

What You Will Learn in Exercise 2

In this exercise you will learn how to:

- Create a layout and specify layout settings.
- Place text and graphic elements in your layout.
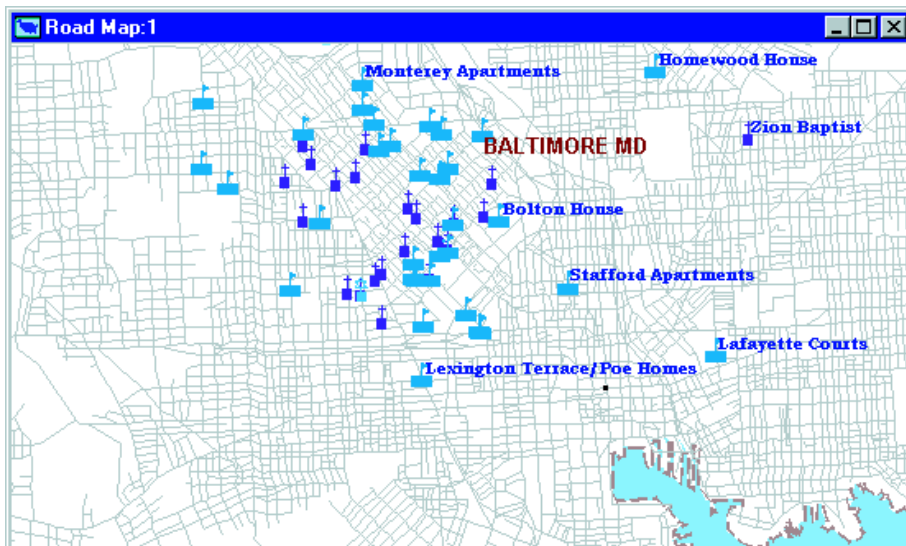- Use the Layout tools to arrange elements in your layout.

Layout Essentials

There are four basic steps to creating a layout:

- Open maps. Any map or dataview that you will want to add to your layout must be open to be placed in a layout.
- Create a new layout and specify layout settings. When you select the New Layout command, C2020 automatically asks you to choose various layout settings. These include the name for the layout, the number of pages, the paper size and orientation, and the type of printer you will be using.
- Place layout items. You can place different items in your layout: maps and dataviews and the frames that hold them, text (such as labels), and graphic elements (such as lines).
- Arrange and adjust layout items. You will adjust the size, style, placement, and alignment of the layout elements until the layout looks the way you wish.

Once you have completed these steps, your layout is ready to print.

Opening a Map

1. ***Open the property.map from C:\my-data that you created in Chapter 3. Click and drag the lower right corner of the map window to give it roughly the landscape proportions shown below:***
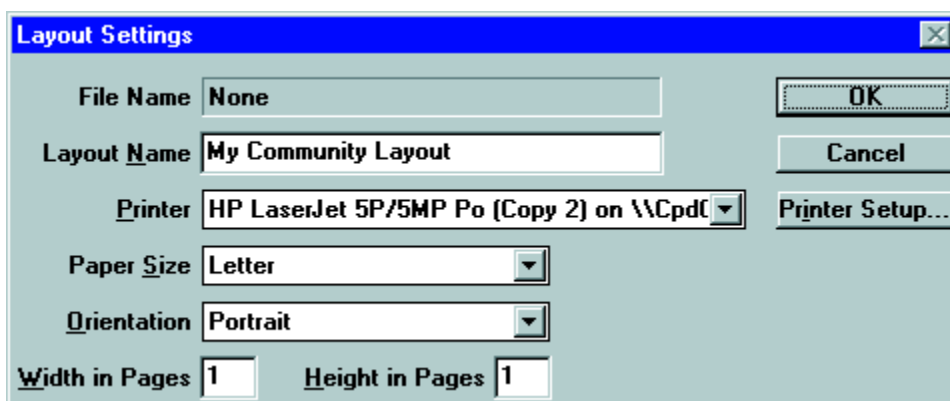

2. ***Choose Window, New Layout,*** from the Main Menu.

3. The Layout Settings dialog box appears. **Make the selections indicated below** (your printer and paper size options may differ slightly), then ***click OK.***

    Note: If you select numbers other than 1 and 1 for Width in Pages and Height in Pages, you can create and print a much larger version of the above map. The larger version created by entering 4 and 3, for example, would consist of 12 (4 x 3) sheets of paper, which could be laid side by side to form a *very large* copy of the map.

FYI

You can open the Layout Settings dialog box to change your layout settings at any time.

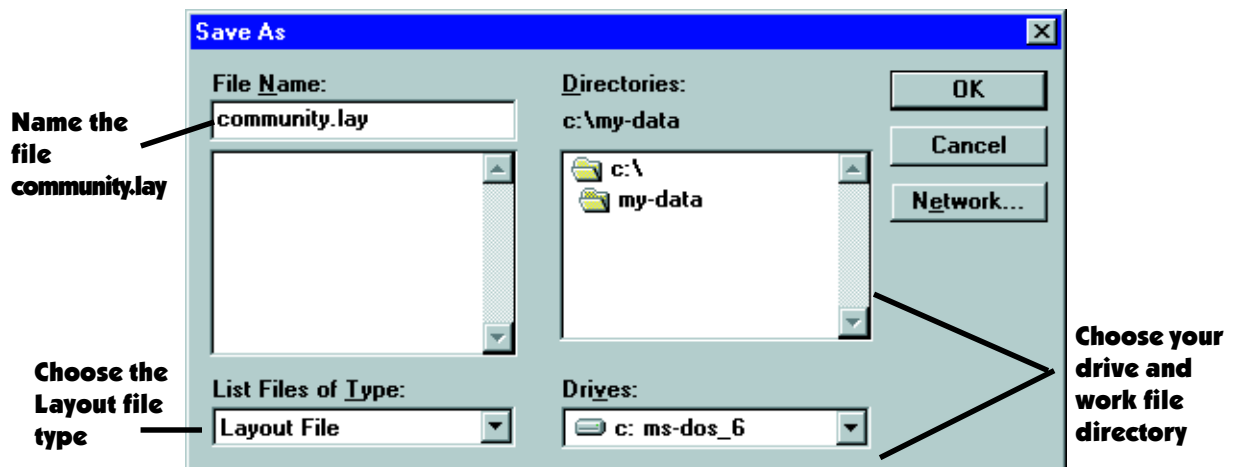With the layout open, just **click on the Layout Settings button** on the main toolbar.

My Community layout window appears, as follows:
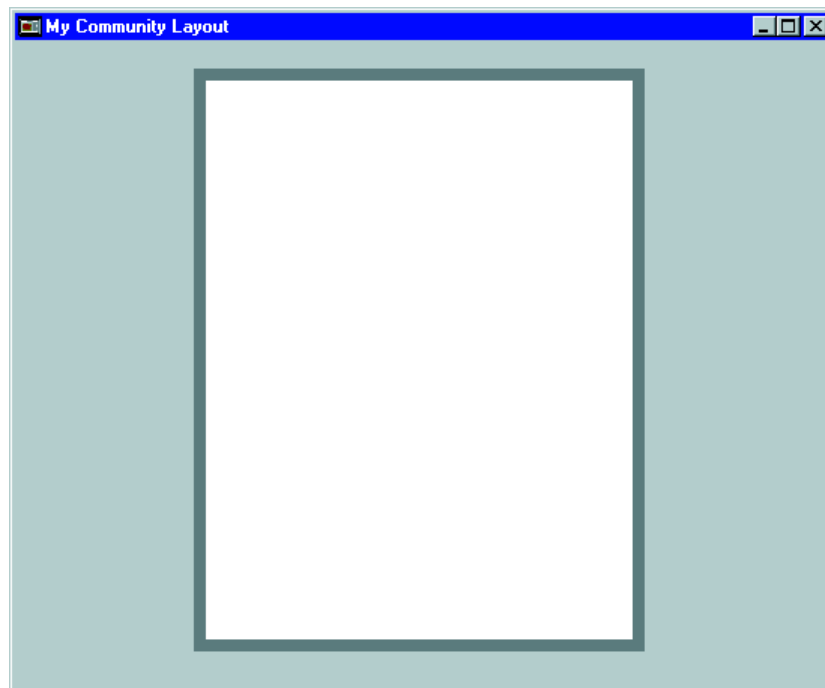
You now have a blank layout. Now is a good time to save your new layout.

Saving Your Layout File

4. ***Select File, Save,*** from the Main Menu.

5. The Save As dialog box appears. **Make the selections below** and ***click OK.***

Notice that the Main Toolbar has changed: The map and dataview tools have been replaced by layout tools. You will learn how to use some of these tools during this exercise.

Now you are ready to start placing elements in your layout. To help you size and position your frames as you place them in your layout, you will use the layout grid option. This option places a grid of evenly spaced dots as reference points for your placement.

6. **Click on the Layout Options button** 🖼 on the Main Toolbar. The Layout Options dialog box appears as shown below:
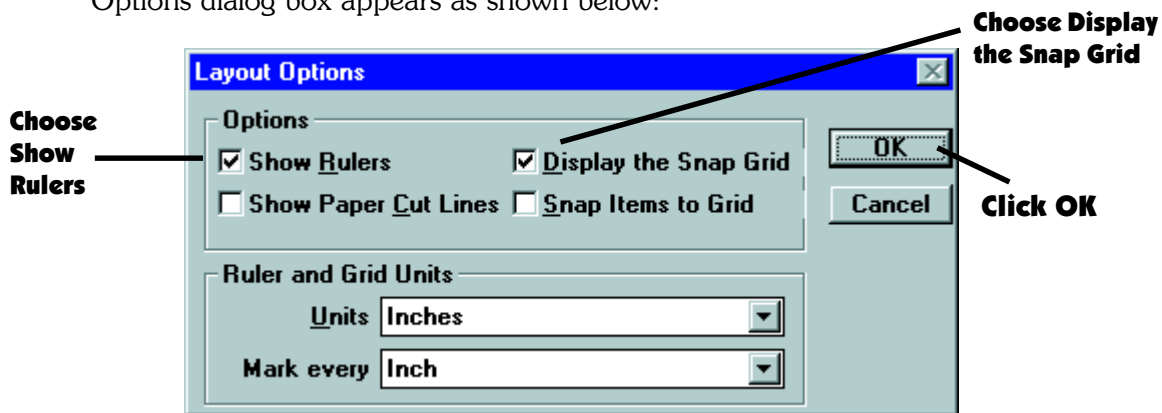
In the Layout Options dialog box, *click on the small boxes next to Display the Snap Grid and Show Rulers.* Selecting these options will make it easier to align items on the layout. **Make sure the Ruler and Grid Units are set to "Inches," and Mark every is set to "Inch." Then click OK.**

A grid of gray dots, spaced 1 inch apart, will appear on your layout. These dots will not appear on a printed document.

> **FYI**
>
> Rulers and grids will show onscreen but not on your printed output.

Placing Text and Graphic Elements in Your Layout

Since text is the easiest thing to add to your layout, the first layout element you will add will be a title.

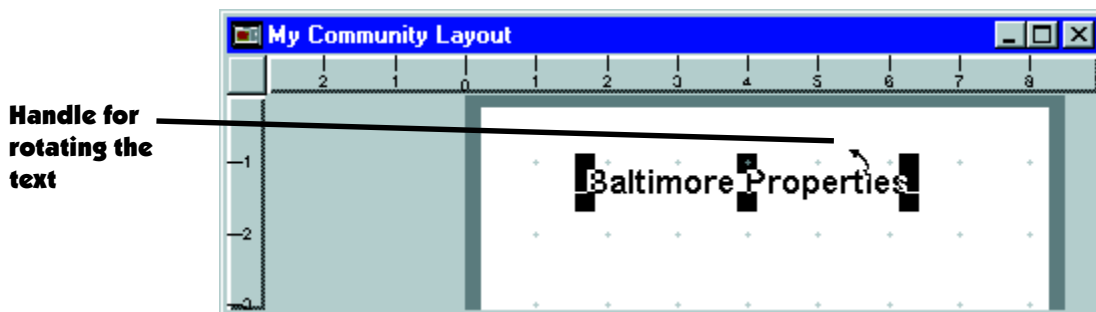7. Click on the **Text tool button** [T] on the main toolbox.

8. Click and drag a text box at the top of your layout, approximately 1/2-inch high and 6 inches long, as shown in the next illustration. This is where you will place the layout title.

Click here

Drag to here and release the mouse button.
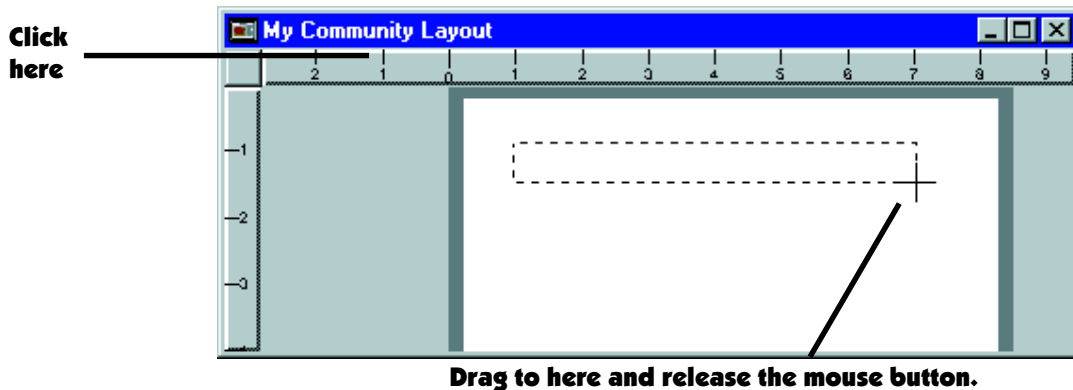
10. When you release the mouse button, one of two things may happen: A blinking text insertion point or the Freehand Text dialog box will appear in the new text box. **If the first happens, type the title right on the layout, then click in the text box.** *Otherwise, type the title in the dialog box and click OK. Type "Baltimore Properties" as your title, then press Enter on your keyboard.*

Your title appears on your layout, with "handles" for adjusting size and rotation (the handles for adjusting rotation are noted in the illustration below). If the handles are not currently visible and you want to use them to resize the text, **click once on the Pointer tool** ⌨ **to activate it, then click once anywhere on the text.**

When the handles are visible, you can resize the text by clicking on any of the handles and dragging your mouse in any direction. To rotate the text, click on the curved arrow above the text, as illustrated below, and drag your mouse in a circular direction to rotate the text to an angle of your choice.

Handle for rotating the text

11. You can use another method to change not just the size, but also the color and content of the text box. **Click on the Pointer tool** ⌨ from the Main Toolbox and **double-click on the title text box.**

12. Another Freehand Text dialog box will appear. This dialog box allows you to set the text content and characteristics such as size, color, and font type. **Set the title's font size to 48 points and click OK.**

Placing a Map in Your Layout

13. To place a map in a layout, **click on the Place in Layout tool** [icon] on the Main Toolbox. Then, using the layout grid as a guide, **click-and-drag a rectangle directly below the text** in the layout approximately 3 inches high by 4 inches wide—roughly the same proportions as the Property Map that you opened and resized at the beginning of this exercise—**then release the mouse button.**

    The Add to Layout dialog box will appear. The dialog box shows a list of the open maps and dataviews that you can choose to add to your layout. Below the list are two options: **"Use actual point sizes,"** and **"Print at fixed scale." Do not select either one at this time.**

14. **Select Road Map,** the map created in chapter 3 that illustrates 66 properties in the region of ZIP Code 21217. Next **click OK.** A copy of this map will appear in your layout, as shown below:
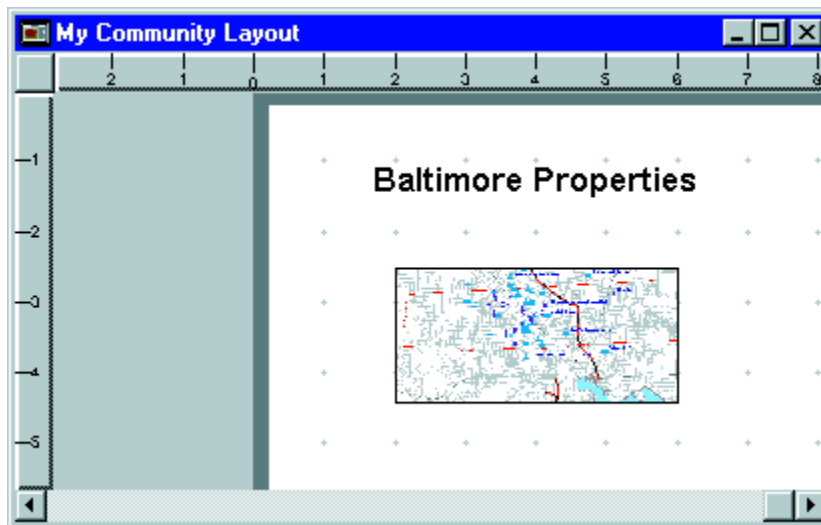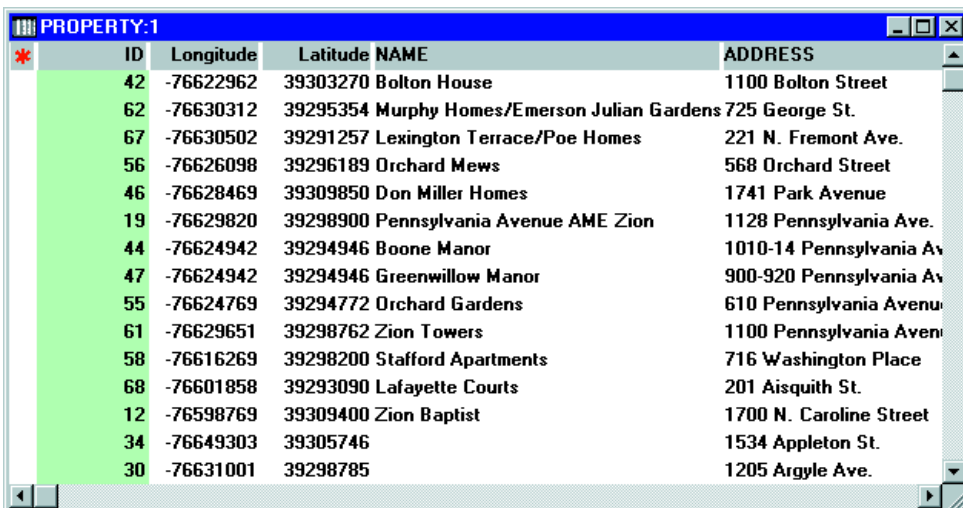
Opening a Dataview Window

In the next few steps of this exercise, you will open a dataview of the Property Map, hide many of the columns, and place the revised table in your layout.

15. To open a dataview of a map layer, first make the Property Map the active window by **selecting Window, Road Map,** from the Main Menu. **Select Property:1** as the working layer from the dropdown menu. Then **click on the New Dataview button** [⊞] on the toolbar.

A dataview of the properties layer appears, as follows:

	ID	Longitude	Latitude	NAME	ADDRESS
	42	-76622962	39303270	Bolton House	1100 Bolton Street
	62	-76630312	39295354	Murphy Homes/Emerson Julian Gardens	725 George St.
	67	-76630502	39291257	Lexington Terrace/Poe Homes	221 N. Fremont Ave.
	56	-76626098	39296189	Orchard Mews	568 Orchard Street
	46	-76628469	39309850	Don Miller Homes	1741 Park Avenue
	19	-76629820	39298900	Pennsylvania Avenue AME Zion	1128 Pennsylvania Ave.
	44	-76624942	39294946	Boone Manor	1010-14 Pennsylvania Av
	47	-76624942	39294946	Greenwillow Manor	900-920 Pennsylvania Av
	55	-76624769	39294772	Orchard Gardens	610 Pennsylvania Avenu
	61	-76629651	39298762	Zion Towers	1100 Pennsylvania Aven
	58	-76616269	39298200	Stafford Apartments	716 Washington Place
	68	-76601858	39293090	Lafayette Courts	201 Aisquith St.
	12	-76598769	39309400	Zion Baptist	1700 N. Caroline Street
	34	-76649303	39305746		1534 Appleton St.
	30	-76631001	39298785		1205 Argyle Ave.

If you were to include this dataview in your layout, all of the columns of data you see above would appear. To display only the most important information in your layout, you will hide all but three of the columns.

16. To select the columns to hide, **hold down the shift key and click in the heading of each column except Name, Address, and Type.**

17. **Click on the Hide Column button** [image] on the Main Menu. Only the three columns listed above should be present now in the dataview. If necessary, resize the dataview and the individual columns to resemble the illustration below:


Placing the Dataview in the Layout

Now the Property: 1 dataview is ready to be placed in your layout.

18. Return to the window that contains your print layout by *selecting Window, My Community Layout,* from the Main Menu. **Select the Place in Layout tool** [image] on the Main Toolbar. *Click and drag a large rectangle below the map,* approximately 4 inches wide and 6 inches high, into which you will place a copy of the revised dataview.

19. When you release the mouse button, the Add to Layout dialog box appears. *Choose Dataview: Neighborhood Properties, then click OK.*

    The Font dialog box appears. This dialog box appears whenever you place a dataview in a layout, because a dataview is essentially just text.

20. Because you are placing a large amount of text into a relatively small frame, ***select Arial Narrow as the font, Regular as the Font Style, and 8 as the size*** as illustrated below. ***Click OK.***
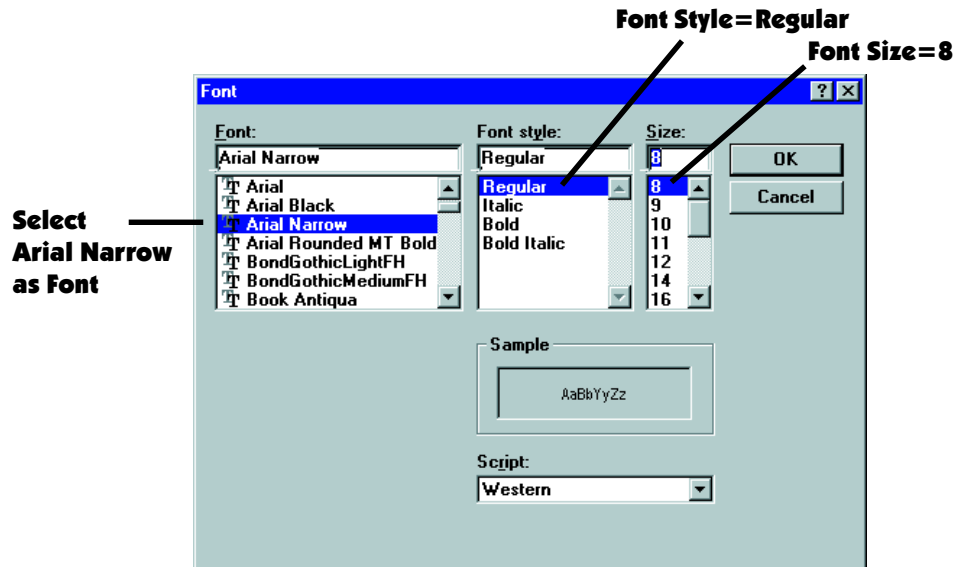
21. Now the dataview should appear below the properties map, as shown in the following illustration. (**Note: If you wish to resize the map or dataview, click on the Pointer tool** [▯] and then click on the dataview or map and resize each using the resize handles that appear.)

Placing Additional Text in Your Layout and Modifying the
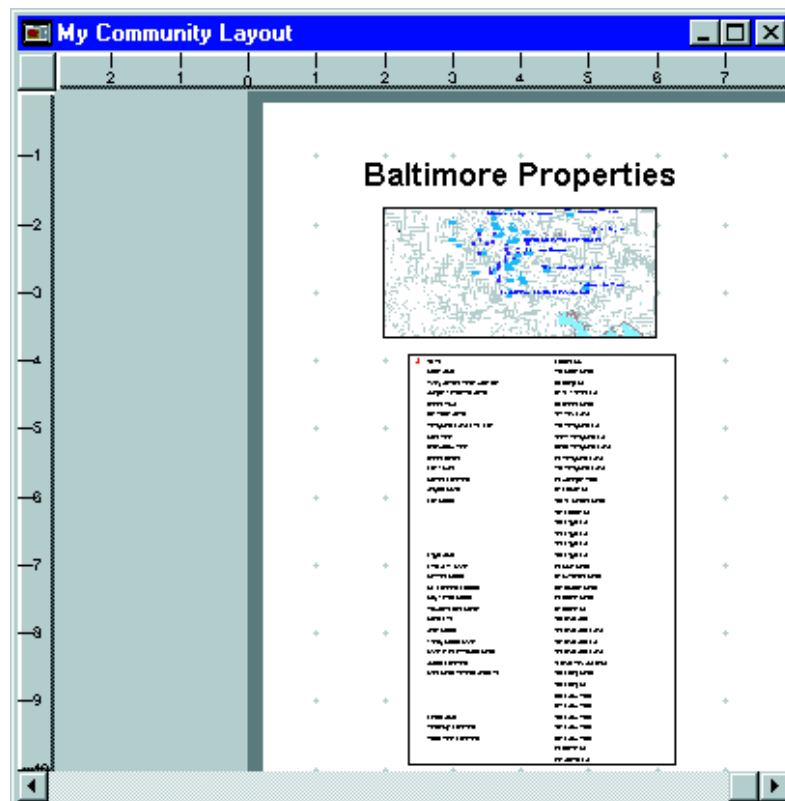
Dataview Frames

22. You can add text to the bottom of the layout in the same way you added the title. **Click on the Text tool** $\boxed{\text{T}}$ on the Main Toolbar. **Next click and drag a text box at the bottom of your layout approximately 1/2-inch high and 4 inches long.** The Freehand Text dialog box will appear. **Type in text of your choosing.** You may want to consider using the following text: "Created using Community 2020 Planning Software." **Click OK** and the text will appear in the layout.

    You may wish to modify the appearance of this text, including its size, color, and font. Do this now by **clicking on the Pointer tool** $\boxed{\text{�):}}$ and then **double-clicking on the text.** The Freehand Text dialog will appear. Make changes now to the attributes of the text. If you want to place a frame around the text, you can do that too at this point. **Click OK** when you are finished modifying the text and the modified text will appear in the layout. You can also modify the text of the title now using the same procedure.

    To change the color and/or size of the frames around the map and the dataview, **double-click on either item using the Pointer tool** $\boxed{\text{�):}}$. A menu will appear to enable you to make these changes. **Click OK** to see the change(s) take effect.

Aligning Objects Within the Layout

23. C2020 has handy tools for aligning or distributing elements within a layout. These tools, shown below, are active when a layout is active and appear in the Main Toolbar:

    If you wish, for example, to align all four items in your layout so that they are centered from left to right, *select all four items simultaneously by holding down the shift key and then clicking on each item using the Pointer tool* $\boxed{\text{�):}}$. While all four items are active, **click on the** **Center Left to Right tool** $\boxed{\text{☐}}$. All four items will become centered relative to each other, yet the four items may not yet be centered on the layout.

To center all four items on the layout, **select all four items simultaneously once again using the Pointer tool, then click on the Center Left to Right on Layout tool** ⊞ . All items will become centered on the layout. Your completed layout may resemble the one shown below:
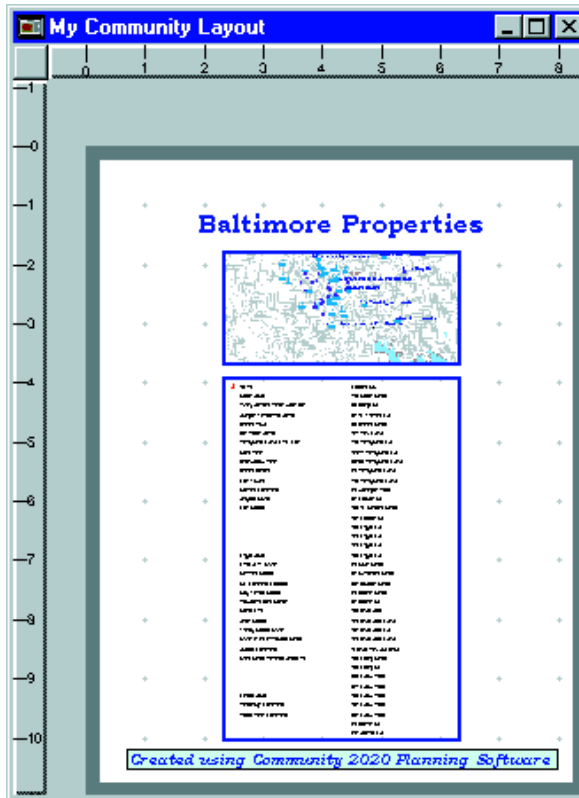
Saving and Printing Your Work

Congratulations! You've completed a layout. Save all the work you've done and print out a copy.

24. Select **File, Save As,** from the Main Menu. **Select a directory and a name for your layout.**

25. Select **File, Print,** from the Main Menu. *Choose portrait orientation, choose your printer's maximum resolution, and click OK.*

Wrapping Up

In this exercise you learned the essentials of creating layouts:

• You created a layout; placed frames, maps, and a dataview; and added text.

• You learned to use a few of the essential layout tools such as Layout Options, Place in Layout, Text, and two Align tools.

With the tools and techniques you learned in this exercise, you are equipped to prepare a variety of professional-looking layouts for reports, proposals, and presentations.

Chapter 6 Summary Questions

1. True or False: When placing a map in a layout, the map will retain the shape of its map window. It is therefore necessary to reshape the map window before placing the map in a layout.

2. True or False: Printing at Fixed Scale will retain the scale of your map regardless of the size of the box you draw when placing the map in a layout. This means if you draw a small box, only the center of your map will be placed in the layout.

3. Which tool do you use to manipulate the freehand items you have added to your layout?

   A. The Freehand Text tool.

   B. The Freehand Line tool.

   C. The Pointer tool.

   D. None of the above.

4. Which orientation should you select when printing a map of Tennessee, since it is much wider than it is tall?

   A. Horizontal.

   B. Vertical.

   C. Landscape.

   D. Portrait.

5. If you wish to redraw a dataview so that some of the columns (fields) are not visible, you must click on the title bar of each field and then click on which tool?

   A. The Delete tool.

   B. The Hide Area tool.

   C. The New Dataview tool.

   D. The Hide Column tool.

Answers to these questions can be found at the end of the manual in Appendix B.